TOSHIBA

OWNER'S MANUAL

COLOR TELEVISION

CE32C10

Dear Customer

Congratulations! You have purchased one of the finest Color TV's on the market!
This manual will help you use the many exciting and useful features to make your TV viewing more enjoyable than ever before.
Before operating your TV set, please read all these safety and operating instructions completely and then retain for future reference.

Customer's Record

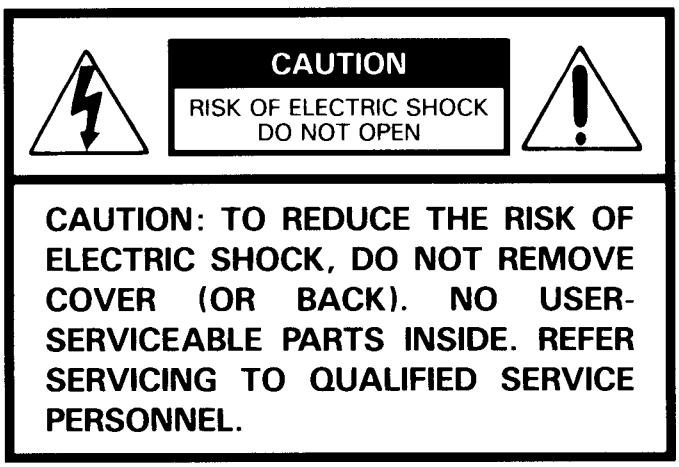
You will find the model number and serial number on the back of your TV set.
Record these numbers in the spaces provided below. Refer to them whenever you call upon your TOSHIBA dealer regarding this product.

Model Number _____

Serial Number _____

SAFETY PRECAUTIONS

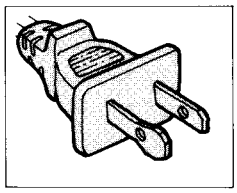
WARNING:
TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.


CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The lightning symbol in the triangle tells you that the voltage inside this product may be strong enough to cause an electric shock. DO NOT TRY TO SERVICE THIS PRODUCT YOURSELF.

The exclamation point in the triangle tells you that important operating and maintenance instructions follow this symbol.

CAUTION:
As a safety feature, the AC plug has one prong wider than the other. It will fit only one way into a standard electrical outlet. If the plug will not fit into the outlet, try turning it around. If the plug will not fit either way, the outlet is probably old and non-standard. You will need to have a new outlet installed by an electrician.



DO NOT CHANGE THE SAFETY FEATURE OF THE PLUG.

CAUTION:
TO PREVENT ELECTRIC SHOCK, DO NOT USE THIS POLARIZED PLUG WITH AN EXTENSION CORD RECEPTACLE OR OTHER OUTLET UNLESS THE PRONGS CAN BE FULLY INSERTED INTO THE OUTLET TO PREVENT ANY EXPOSURE OF THE PRONGS ON THE POLARIZED PLUG.

CAUTION:
This TV set may be used only with TOSHIBA stand model ST323. Use with other stands may result in instability causing possible injury.

NOTE TO CATV SYSTEM INSTALLER:
This reminder is provided to call the CATV system installer's attention to Article 820-40 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

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INSTALLING YOUR TV SET

WARNING: Do not place the TV on an uneven floor or on an unstable stand. The set may overturn, causing serious injury to you or your children. Take care that your children do not get on the TV or hang on to it.

DO NOT:

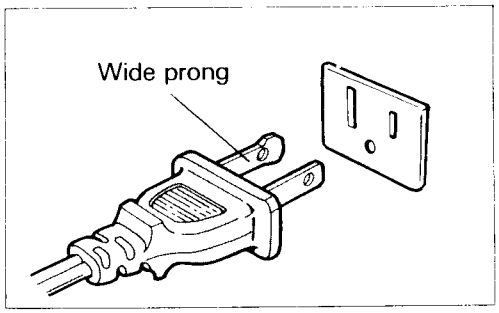
- Place your TV set in a room where direct lighting strikes the screen.
- Place your TV set too close to a wall, in a confined area or in a very warm location.
- Change the plug's safety prong.

DO:

- Use soft and indirect lighting.
- Sit at least 6 feet away from the set.
- Provide normal air circulation for reliable long life.
- Plug into an electrical outlet with standard house power. (120 volt AC, 60Hz)

To Insert the Plug

As a safety feature, the plug has one prong wider than the other.
It will fit only one way into an outlet.
DO NOT CHANGE THE SAFETY FEATURE OF THE PLUG.



Safety Notes

Should any liquid or solid object fall into the cabinet, unplug the TV and have it checked by qualified personnel before operating it any further.

ANTENNA/CABLE TV GENERAL INFORMATION

You can use either an indoor or outdoor antenna to receive VHF and/or UHF channels.
Channels 2-13 are VHF channels, and channels 14-69 are UHF channels.
We recommend using an outdoor antenna for better picture quality.
You can receive Cable TV by connecting a cable supplied by your local cable company.
Cable TV delivers both VHF and UHF channels and other channels not available from your antenna.

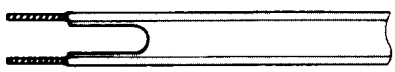
TYPES OF ANTENNA CABLES

Shown below are two basic types of antenna cables. Signals from a home antenna may be conducted through either type. Cable TV signals will always be conducted through 75 ohm coaxial cable.

1. A 75 ohm system is generally a round cable with F-type connectors that can easily be attached to a terminal without tools.

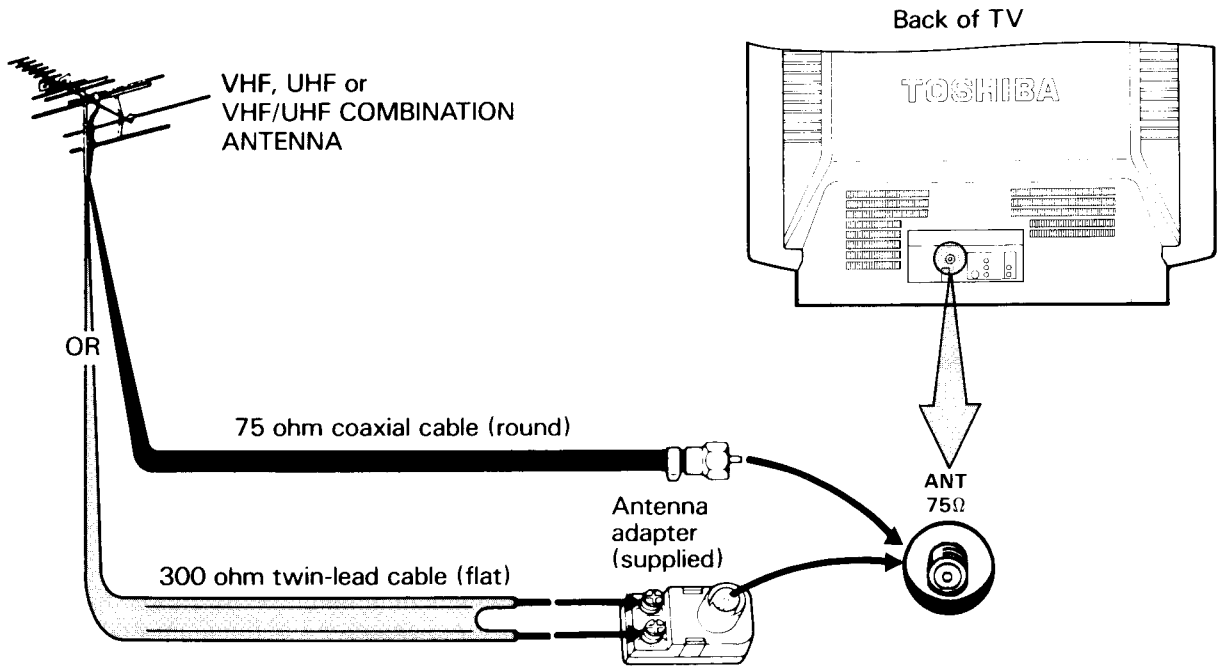
2. A 300 ohm system is a flat "twin-lead" cable that can be attached to a terminal through an antenna adapter supplied as an accessory.

Optional F-type connector

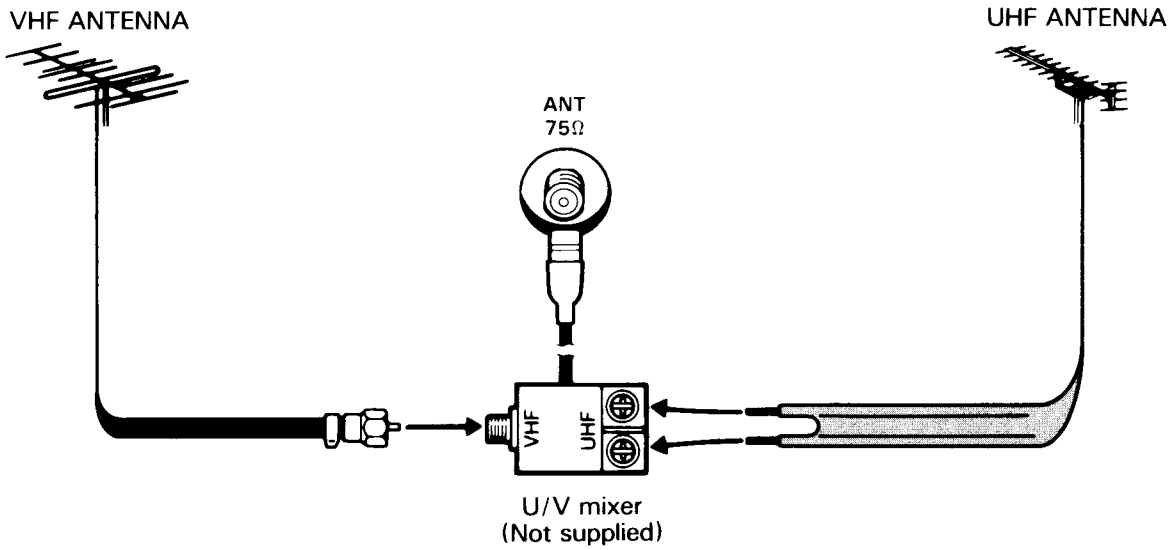


HOME ANTENNA CONNECTION

Connecting a single lead-in cable



Connecting both VHF and UHF lead-in cables



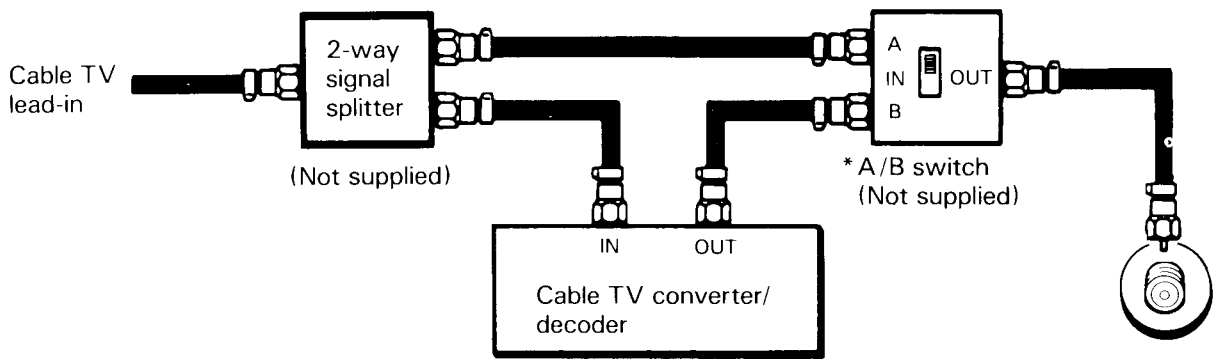
CABLE TV CONNECTIONS

Generally, the incoming cable for a Cable TV system can be connected directly to the TV antenna terminal just like a home antenna connection. Simply attach it to the ANT (75Ω) terminal. You will be able to receive unscrambled cable channels.

Cable without a decoder box (Unscrambled channels)

Some cable companies offer "premium pay channels". Since the signals of these premium pay channels are scrambled, a cable TV converter/decoder is generally provided to the subscriber by the cable TV company. This decoder box is necessary for normal viewing of the scrambled channels. For more specific instructions on installing cable TV, consult your cable TV company.

Cable with a decoder box (Scrambled channels)



* "A" position on the A/B switch allows you to select unscrambled channels using the TV's channel keys. "B" position allows you to select scrambled channels via the converter/decoder box using the converter's channel keys. Place your TV on channel 3 or 4 to match the converter's output channel.

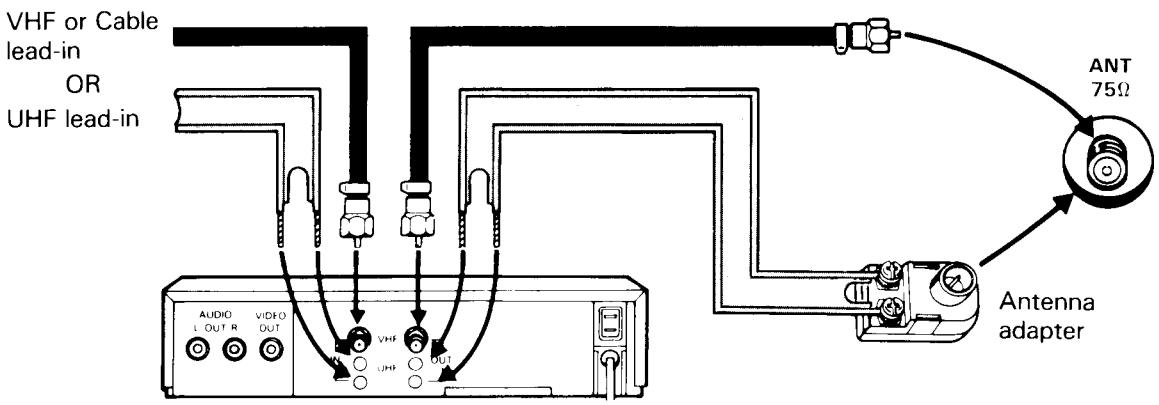
Notes:

- The descrambler device may or may not be a part of the cable converter.
- Since cable systems vary, you may wish to consult your local cable company for additional information.

ANTENNA/CABLE TV AND VCR CONNECTIONS

ANTENNA/CABLE TV AND VCR CONNECTIONS

Antenna/Cable connection via VCR (simplified method)

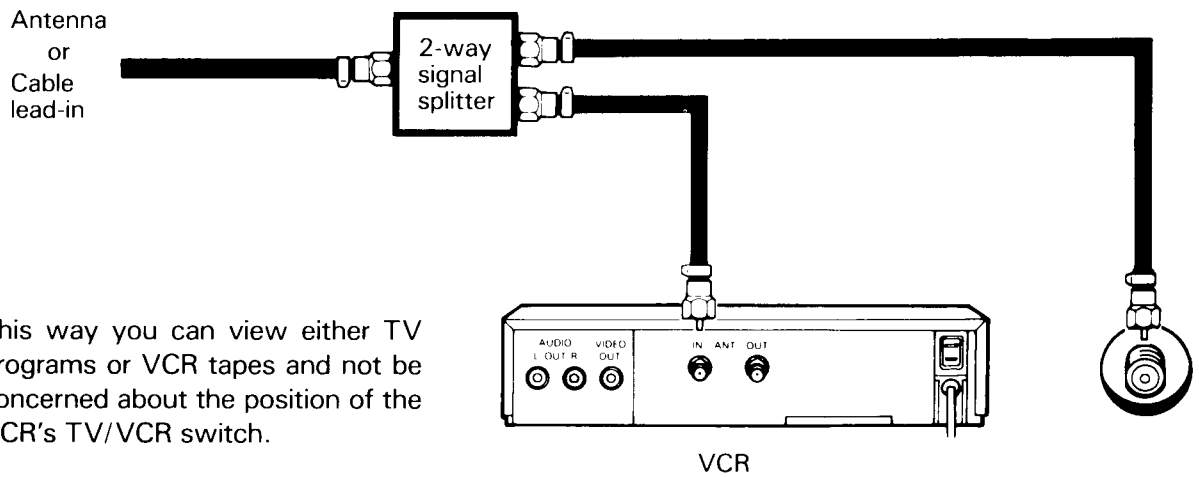


Cable-ready VCR (U/V separated)

Notes:

- On many VCR's, playing tapes causes the VCR's TV/VCR switching to disconnect the antenna signals from the TV. If you cannot select a certain channel, try pressing the TV/VCR button on the Remote Control.
- If you connect both VHF and UHF lead-in cables, use an optional U/V mixer. See page 5.

Using a 2-way signal splitter



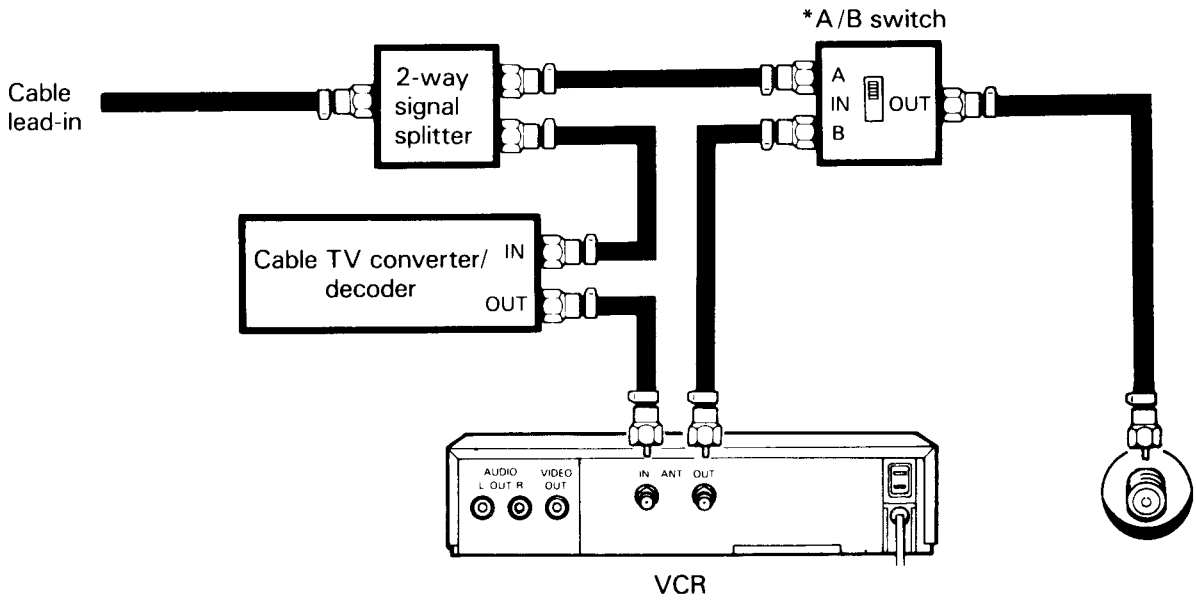
This way you can view either TV programs or VCR tapes and not be concerned about the position of the VCR's TV/VCR switch.

VCR

Note: When connected either way, the VIDEO/AUDIO connections from the VCR to the TV are required for (stereo) playback from VCR's. See page 31 for connection details.

ANTENNA/CABLE TV AND VCR CONNECTIONS (Continued)

Cable with a converter/decoder box (Scrambled channels)

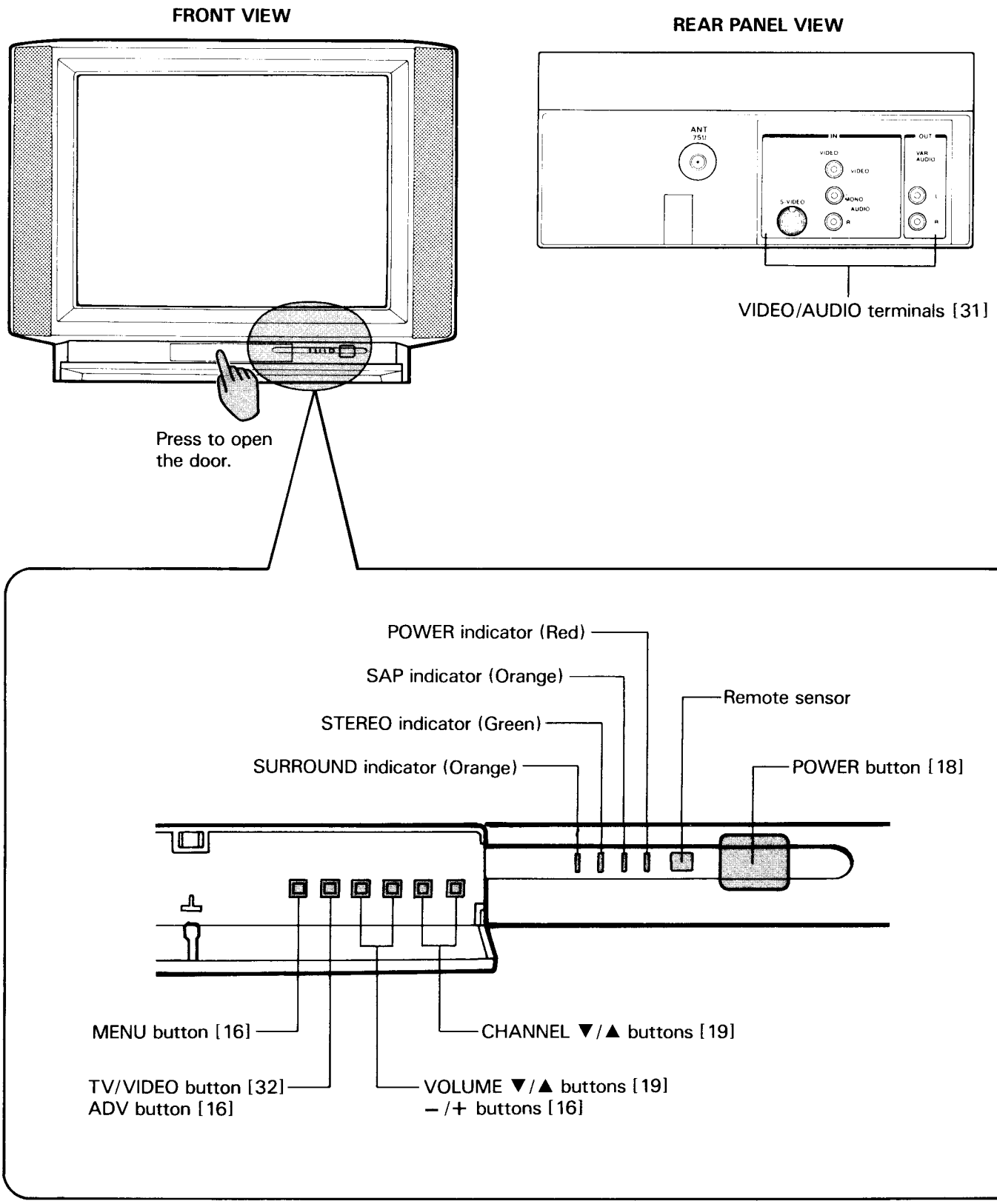


* "A" position on the A/B switch allows you to select unscrambled channels using the TV's channel keys. "B" position on the A/B switch allows you to select scrambled channels via the cable TV converter/decoder using the converter's channel keys. Place your TV and VCR on channel 3 or 4 to match the converter's output channel.

Note: When connected this way, the VIDEO/AUDIO connections from the VCR to the TV are required for stereo playback from stereo VCR's. See page 31 for connection details.

LOCATION OF CONTROLS (TV Set)

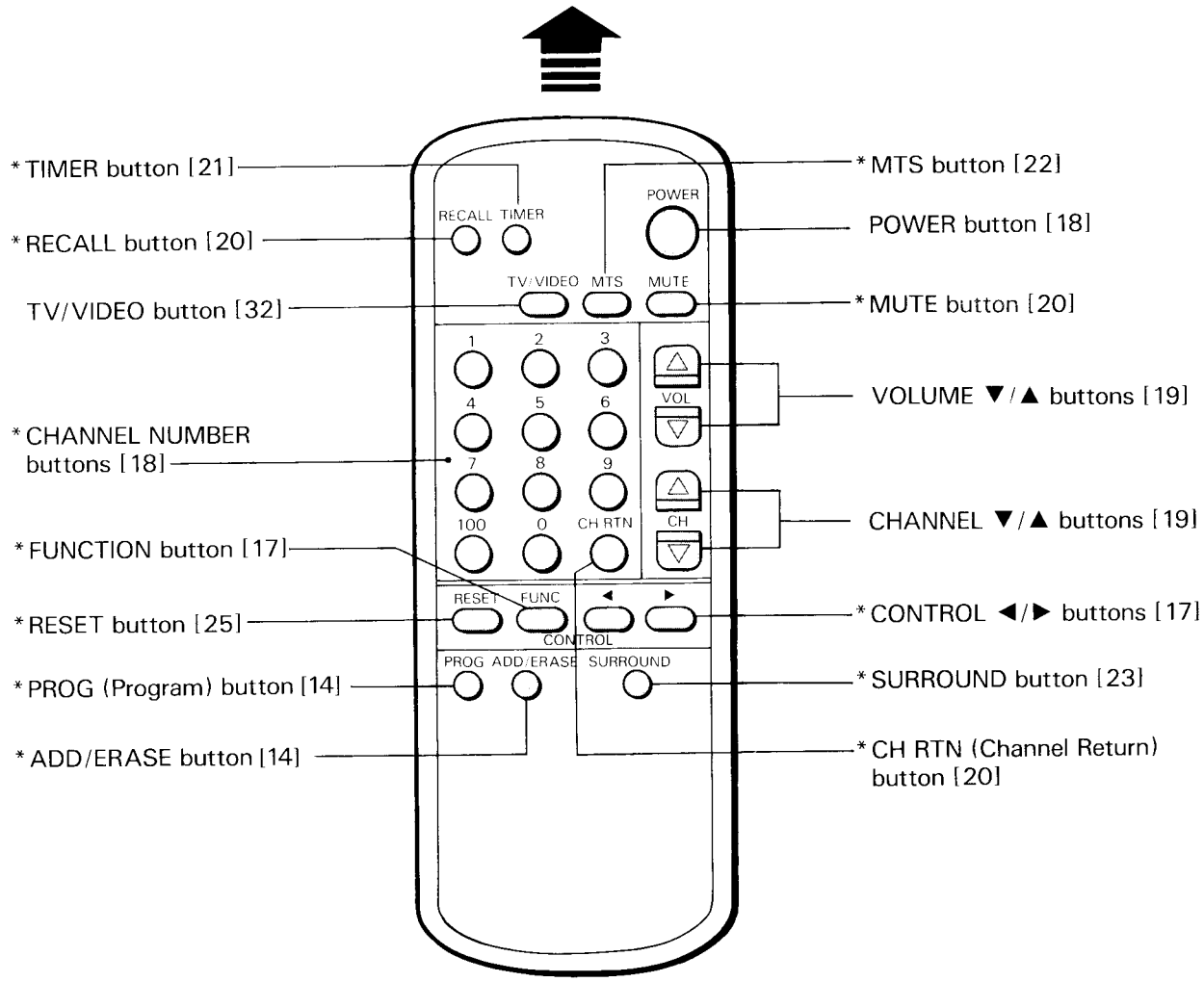
For specific use of each control, consult the corresponding page numbers in brackets.



LOCATION OF CONTROLS (Remote Control)

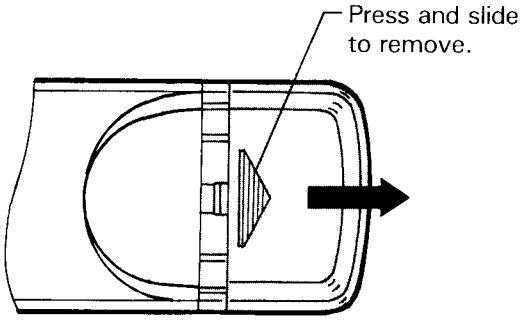
This Remote Control allows you to control the functions of your TV set from 16 feet (5m) away.
The " * " marked function buttons do not have duplicate locations on your TV set. They can be controlled only by the Remote Control. For specific use of each control consult the corresponding page numbers in brackets.

Aim at the remote sensor on the TV set

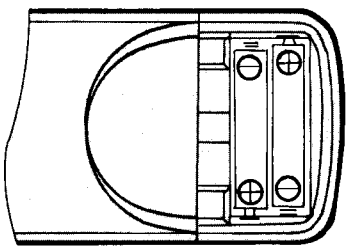


INSTALLING AND REPLACING BATTERIES

1 Place the Remote Control with the face down. Press down on the ridged area of the battery cover and slide it off.



2 Place the four "AAA" size batteries, matching the + and − signs on each battery to the + and − signs of the battery compartment.



3 Replace the battery cover until the lock snaps.

TIPS FOR BEST OPERATION

- For optimum performance, aim the Remote Control directly at the equipment it is being used to operate and be sure there is no obstruction between the Remote Control and the equipment.
- If your Remote Control does not always adjust the set as you wish, you probably need to replace the batteries. See the directions at the left.
- Remove dead batteries immediately to prevent battery acid from leaking into the battery compartment.
- If you do not intend to use the Remote Control for a long period, remove the batteries.

CAUTION:

- Do not throw your batteries into a fire. Dispose of your batteries in a designated disposal area.
- Do not combine used old batteries with new ones.
- Do not mix battery types.

TV CHANNELS

This TV will receive the following TV signals:

1. TV: Off the air TV signals. (VHF channels 2 thru 13 and UHF channels 14 thru 69)
2. STD CABLE: Standard (or IRC: Incremental Related Carrier) cable TV signals.
3. HRC CABLE: Harmonic Related Carrier cable TV signals.
4. IRC CABLE: Incremental Related Carrier cable TV signals.

For each of these systems, your TV set has exact frequencies built into it to ensure precise tuning. For precise tuning, the TV CABLE function must be set to match your TV or CABLE system. The chart on the next page shows channels available in each system and how your TV displays them. When you connect your TV to a cable TV system and if you are not sure what system they are using, proceed with the following section "HOW TO FIND YOUR TYPE OF CABLE SYSTEM" or consult your local cable company to check if your system is STD (IRC) or HRC.

HOW TO FIND YOUR TYPE OF CABLE SYSTEM

1 Select the "STD CABLE" mode following the instructions shown below.

2 Select various channels and confirm whether the channel will lock immediately with perfect picture. If the channels seem to take a few seconds to lock in, your cable system may be one of the other cable systems. In this case, continue with the following steps.

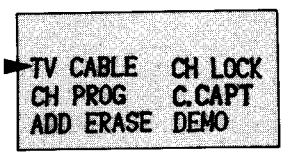
3 Select the "HRC CABLE" mode and try above procedure again.

4 If you are having problem with only channel 5 or 6, you may have an IRC system so change the mode to the "IRC CABLE".

SETTING THE TV CABLE FUNCTION

1 Turn the TV set on and press the FUNC button on the Remote Control or the MENU button on the TV set to display the Set up menu on the screen shown below.

Set up menu



Repeatedly press the FUNC button on the Remote Control or the ADV button on the TV set until "TV CABLE" is displayed in magenta.

2 Press either the CONTROL ▶(+) or ◀(−) button. Each time you press the button, the "TV", "STD CABLE", "HRC CABLE" or "IRC CABLE" will be selected in order.

Press the button until the mode that corresponds to your TV or CABLE system is displayed in magenta.
The on-screen display will automatically disappear after about 6 seconds.

Note: See page 16 for detailed Menu function.

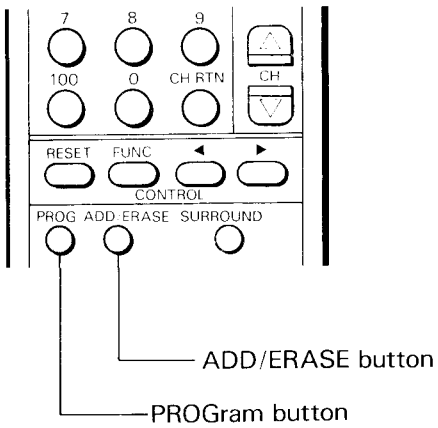
TV/CABLE CHANNEL REFERENCE CHART

NUMBER ON THIS TV	CORRESPONDING CHANNEL NUMBER		NUMBER ON THIS TV	CORRESPONDING CHANNEL NUMBER		NUMBER ON THIS TV	CORRESPONDING CHANNEL NUMBER	
	TV OFF THE AIR	CABLE TV STD/HRC/IRC		TV OFF THE AIR	CABLE TV STD/HRC/IRC		TV OFF THE AIR	CABLE TV STD/HRC/IRC
1	—	A-8	37	37	AA	73		73
2	2	2	38	38	BB	74		74
3	3	3	39	39	CC	75		75
4	4	4	40	40	DD	76		76
5	5	5 (A-7)	41	41	EE	77		77
6	6	6 (A-6)	42	42	FF	78		78
7	7	7	43	43	GG	79		79
8	8	8	44	44	HH	80		80
9	9	9	45	45	II	81		81
10	10	10	46	46	JJ	82		82
11	11	11	47	47	KK	83		83
12	12	12	48	48	LL	84		84
13	13	13	49	49	MM	85		85
14	14	A	50	50	NN	86		86
15	15	B	51	51	OO	87		87
16	16	C	52	52	PP	88		88
17	17	D	53	53	QQ	89		89
18	18	E	54	54	RR	90	Not used	90
19	19	F	55	55	SS	91		91
20	20	G	56	56	TT	92		92
21	21	H	57	57	UU	93		93
22	22	I	58	58	VV	94		94
23	23	J	59	59	WW	95		95
24	24	K	60	60	XX	96		96
25	25	L	61	61	YY	97		97
26	26	M	62	62	ZZ	98		98
27	27	N	63	63	AAA	99		99
28	28	O	64	64	BBB	100		100
29	29	P	65	65	65	101		101
30	30	Q	66	66	66	102		102
31	31	R	67	67	67	⋮		⋮
32	32	S	68	68	68			
33	33	T	69	69	69			
34	34	U	70	Not used	70	123		123
35	35	V	71		71	124		124
36	36	W	72		72	125		125

Note: The above chart is typical of many cable system channel allocations. However the numbering system may differ in your area. If in doubt, consult your local cable company.

PROGRAMMING CHANNEL MEMORY

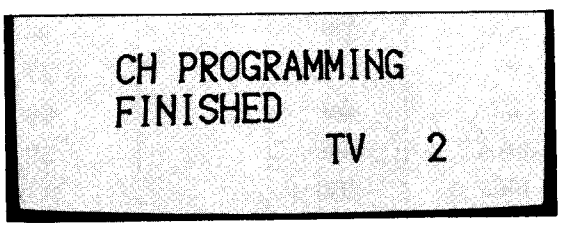
This TV set can memorize channels you use and erase channels you do not use.
When the CHANNEL ▲ or ▼ button is pressed, the TV goes to the next memorized channel. Channel selection is easier and faster. In many television viewing areas, programming available channels into memory is an easy one step procedure with the PROG button on the Remote Control. When it is decided that certain channels should be erased from the channel scan memory, the ADD/ERASE button provides complete programming flexibility.



Autoprogramming channels

1 Turn the TV set on and make sure the TV CABLE function (page 12) is properly set.

2 Press the PROG button to start autoprogramming. The TV will automatically cycle through all channels and place active channels in the channel memory.
When the following message appears on the screen, the autoprogram is complete.



You can check to see which channels are in memory by pressing the CHANNEL ▲/▼ buttons.

Note: If AC power supply is cut off for a few seconds or more, your autoprogramming will be cancelled and will return to the original factory programming. In that case, reautoprogram your TV.

Erasing channels you do not use

If you want to erase any of the memorized channels:

1 Press either the CHANNEL ▲ or ▼ button until an undesired channel is tuned.

2 Press the ADD/ERASE button once. The words "CH ERASE" are displayed on the screen in magenta for about 2 seconds indicating that the channel has been erased from the memory.

The Added mode and Erased mode alternate whenever the ADD/ERASE button is pressed.

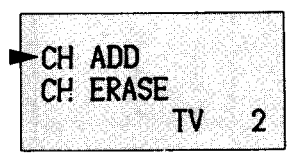
3 Repeat steps 1 and 2 until all undesired channels have been erased from the memory.

Adding channels

You may want to memorize again the channel which has been erased once.

1 Using the CHANNEL NUMBER buttons on the Remote Control, select the channel you want to memorize.

2 Press the ADD/ERASE button once. The words "CH ADD" are displayed on the screen in magenta indicating that the channel has been memorized.



3 Repeat steps 1 and 2 for other channels.
Press the CHANNEL ▲ or ▼ button to make sure the channel programming is made as desired.

You have now completed the channel programming.

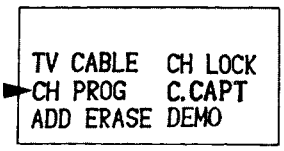
You can also perform these functions using the Set up menu function.

CH PROG FUNCTION

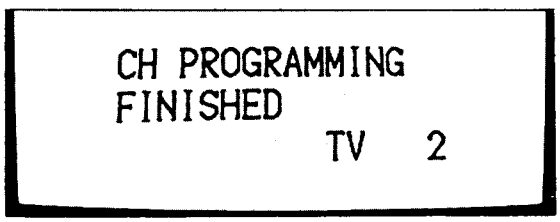
1 Press the FUNC button on the Remote Control or MENU button on the TV set to display the Set up menu on the screen.

Repeatedly press the FUNC button on the Remote Control or the ADV button on the TV set until "CH PROG" is displayed in magenta.

Set up menu



2 Press either the CONTROL ▶(+) or ◀(−) button to start autoprogramming.
The TV will automatically cycle through all channels and place active channels in the channel memory.
When the following message appears on the screen, the autoprogram is complete.



You can check to see which channels are in memory by pressing the CHANNEL ▼/▲ buttons.

ADD ERASE FUNCTION

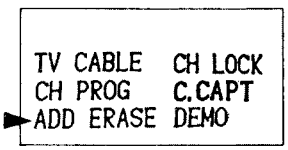
First follow the instructions "CH PROG FUNCTION", and then add or erase individual channels as desired.

Erasing/Adding channels

1 Select the channel you want to erase using the CHANNEL ▲ or ▼ button, or select the channel you want to add using the CHANNEL NUMBER buttons.

2 Select the Set up menu, and repeatedly press the SETUP button on the Remote Control or the ADV button on the TV set until "ADD ERASE" is displayed in magenta.

Set up menu



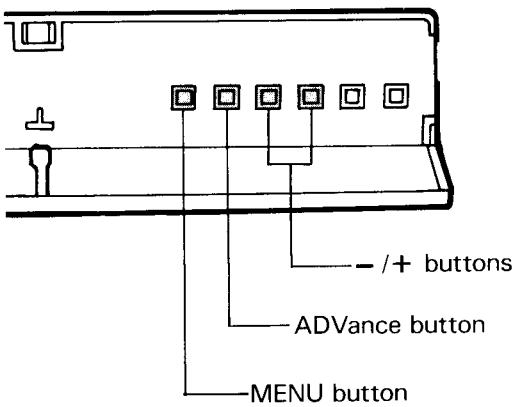
3 Press either the CONTROL ▶(+) or ◀(−) button:
To erase the channel, press the button until "CH ERASE" is displayed in magenta.
To add the channel, press the button until "CH ADD" is displayed in magenta.

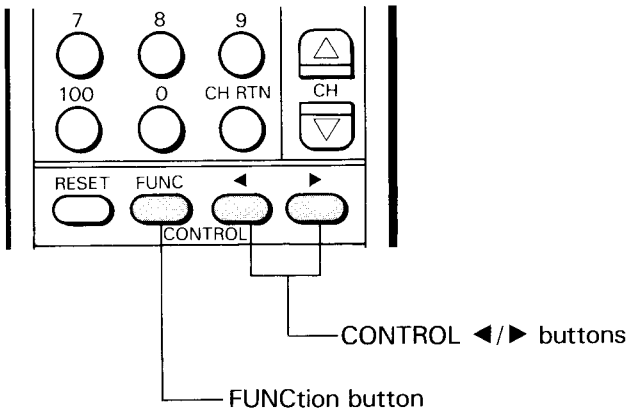
4 Repeat steps 1 through 3 for other channels.
Press the CHANNEL ▲ or ▼ button to make sure the channel programming is made as desired.

Note: The ADV button on the TV set will function only when any of the menu displays is on the screen.

MENU FUNCTION (General Instructions)

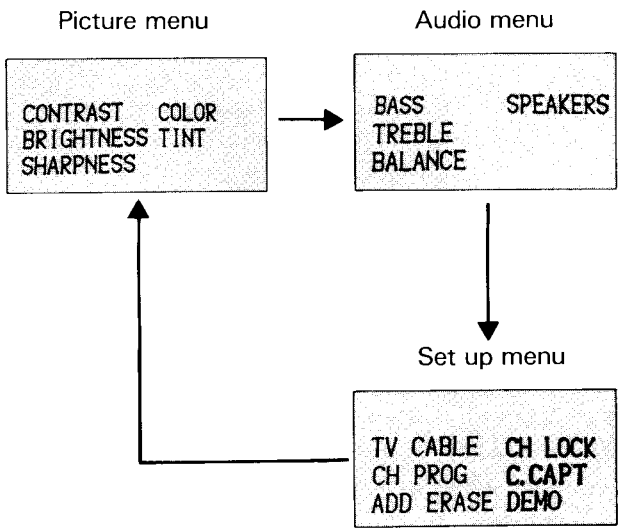
We suggest you familiarize yourself with the procedure before using the Menu function.
To adjust any TV feature, the use of the Menu function is required. The adjustments that can be made to the TV appears on the screen.





MENU BUTTON (on TV)

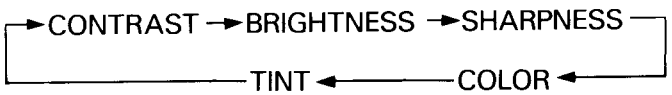
Each time you press the button, the Picture, Audio or Set up menu on-screen display is selected in the following order, then press the ADV button.



ADV BUTTON (on TV)

Use this button after you have pressed the MENU button to select the function you want to adjust.
Each time you press the button, the function to be adjusted will be selected in the following order.

<Example: PICTURE menu>

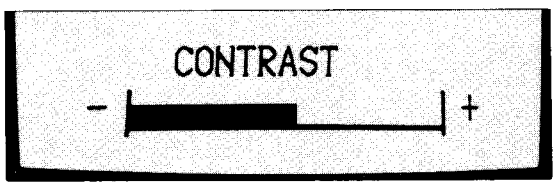


The selected function will be displayed in magenta.

– /+ BUTTONS (on TV)

Use these buttons to adjust the selected function after you have pressed the ADV button.

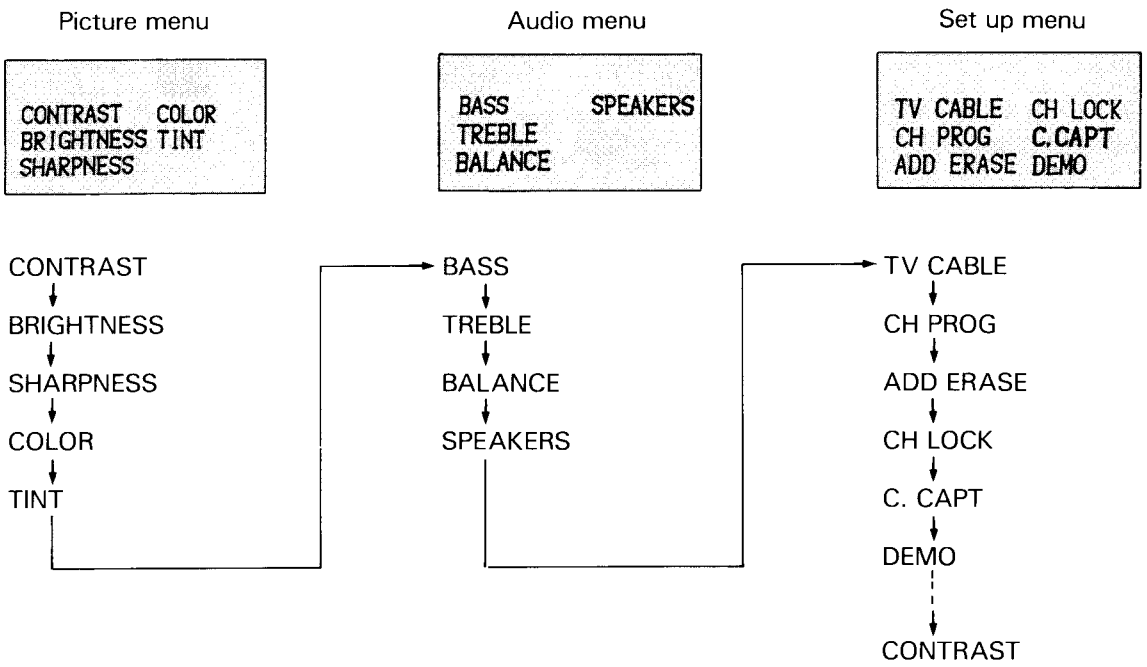
<Example: CONTRAST adjustment mode display>



Decrease (– button) ⟷ Increase (+ button)

FUNCtion BUTTON (on Remote)

Press the button repeatedly until the function you want to adjust is selected.
The selected function will be displayed in magenta.
Then press the CONTROL ◀/▶ buttons.



CONTROL ◀/▶ BUTTONS (on Remote)

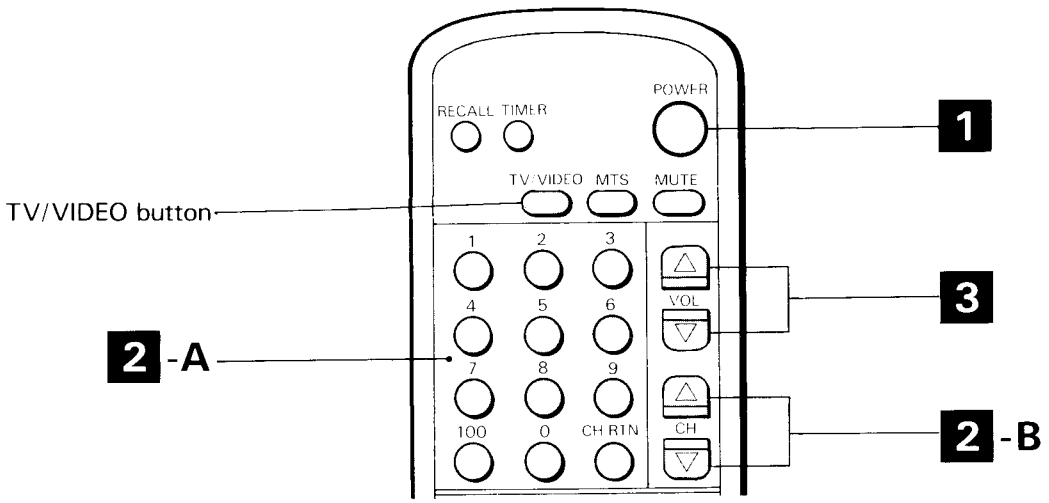
Use these buttons to adjust the selected functions after you have pressed the FUNC button. These buttons are the same functions as the − / + buttons on the TV.

Notes:

- The ADV button on the TV set will function as the TV/VIDEO button when no menu display is on the screen.
- The − / + buttons on the TV set will function as the VOLUME ▼/▲ buttons when no menu display is on the screen.

WATCHING TV PROGRAMS

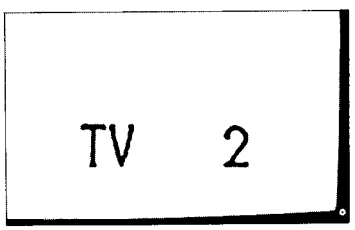
Generally, the Remote Control is all that is required to operate the TV set.



1 TO TURN THE TV SET ON

Press the POWER button to turn the TV set on.
The POWER indicator (Red) will light up and the picture will appear in a few seconds.
The channel number will be displayed at the right bottom corner on the screen for a few seconds as shown below.

<Example>



To turn the TV set off, press the button again.

Note: The TV/VIDEO button is used to view the signals coming from other devices like VCR's or Video Disc Players connected to this TV. Details are on page 32.

2 TO SELECT CHANNELS

Make sure the TV CABLE function (page 12) is properly set. Then select your desired channels using the CHANNEL NUMBER buttons or the CHANNEL ▼/▲ buttons.

A. USING THE CHANNEL NUMBER BUTTONS

- To select channels 1 through 9, two methods are available.

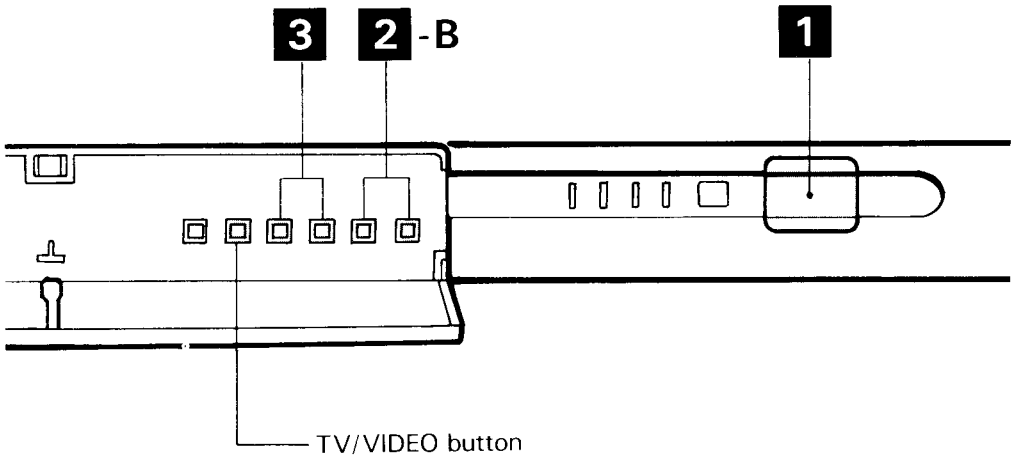
  Example: To select channel 4.
  One-digit entry — Press "4". Channel 4 will be selected within 2 seconds.
  Two-digit entry — Press "0" and "4". Channel 4 will be selected immediately.

- To select channels 10 through 99, the two-digit entry must be used.

  Example: To select channel 38.
  Press "3" and "8", and channel 38 will be selected immediately.

- To select channels 100 through 125, the three-digit entry must be used.

  Example: Press "100", "2" and "5" in sequence. Channel 125 will be selected.



B. USING THE CHANNEL ▲/▼ BUTTONS

When you have completed channel programming according to the instructions, use the CHANNEL ▲/▼ buttons.

Follow the section "PROGRAMMING CHANNEL MEMORY" on page 14.

Press and release the CHANNEL ▲ or ▼ button. The set will select the next memorized channel. It will not stop at unmemorized channels. Press the button again to select the next memorized channel.

<Example – TV mode>

▲ button – for higher numbered channels.

2 → 3 ---→ 68 → 69 → 2 ---→

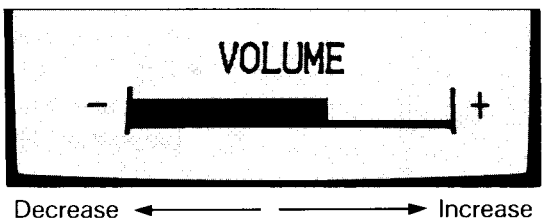
▼ button – for lower numbered channels.

69 → 68 ---→ 3 → 2 → 69 ---→

3 TO ADJUST VOLUME

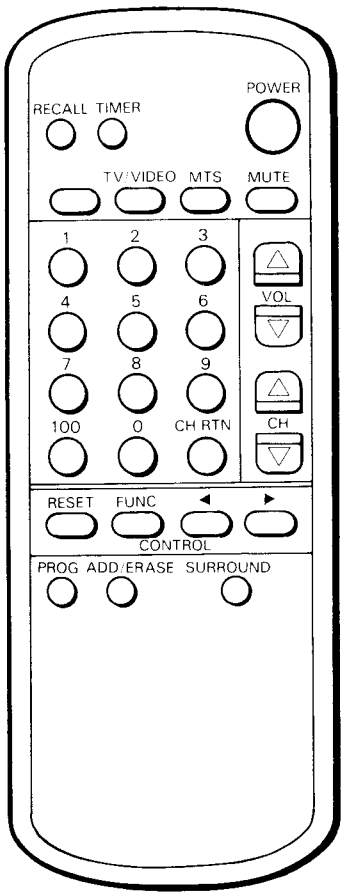
To increase volume, press the VOLUME ▲ button. To decrease volume, press the VOLUME ▼ button. Press and hold either button until your desired volume level is obtained.

A visual display of the volume level is provided by a magenta bar graph displayed on the screen.



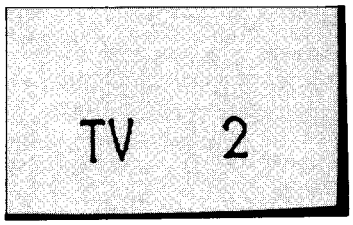
Note: The Volume ▼/▲ buttons on the TV set will function as the menu –/+ buttons while any of the menu displays (Picture, Audio or Set up) are on the screen. (See page 16.)

CONVENIENT REMOTE FUNCTIONS



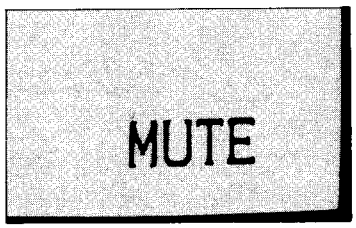
CALLING UP THE ON-SCREEN INFORMATION

To display the channel number or video mode "VIDEO" on the screen for a few seconds, press the RECALL button.



MUTING THE SOUND

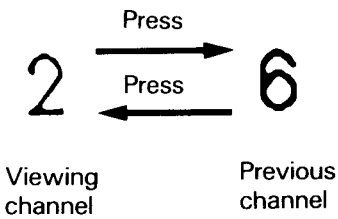
To mute the sound immediately without affecting the picture, press the MUTE button. The word "MUTE" will be displayed on the screen as shown. This is useful during telephone calls or other interruptions.
To restore the sound, press the button again.



CHANGING QUICKLY BETWEEN TWO CHANNELS

To return to the last channel that was tuned previously, press the CH RTN button. This is useful should you want to view two channels. This allows you to view two programs without entering the actual channel number each time.

- To operate, select the first channel you want to view. Then select the other channel with the CHANNEL NUMBER buttons.
- The TV will now change back and forth between the two channels each time you press the CH RTN button.



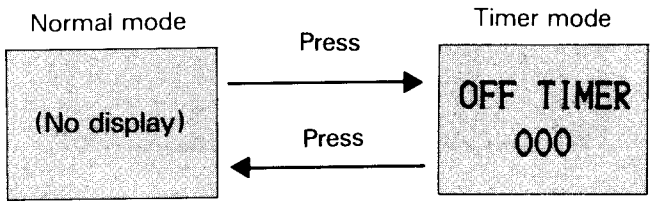
Note: If a vacant channel is tuned or TV broadcast for a day is finished, the TV will automatically turn off after about 15 minutes. However, if the Off-timer is operating, it takes precedence. This ***Auto-Power-Off*** feature does not operate in the VIDEO mode.

SETTING THE OFF-TIMER (SLEEP)

This feature allows you to set the TV to turn itself off automatically after a certain period of time (every 10 minutes, up to 180 minutes or 3 hours). This is useful whenever you want to watch TV for an hour or so before going to sleep.
The off-timer setting can be made only by the Remote Control.

TIMER BUTTON

Each time you press the button, the Normal mode and Timer mode will alternate as shown below.



TO SET THE OFF-TIMER

Example: To set the off-timer to turn the TV set off after 120 minutes.

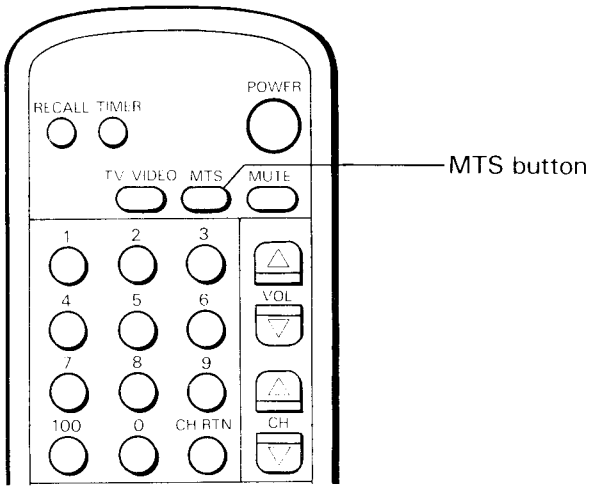
ON-SCREEN DISPLAY	PROCEDURE
000	1. Press the TIMER button to select the Timer mode.
100	2. Press "1" button.
120	3. Press "2" button, and press TIMER button to start the timer. The color of display changes from red to cyan, and then goes off.
Setting completed.	

Notes:

- If you press the POWER button while the timer is operating, the timer setting will be cancelled.
- If you want to know the time remaining, press the TIMER button. Remaining time will be displayed on the screen. To erase the display, press the button again to set to the Normal mode.
- You cannot select channels with the Remote Control in the Timer mode.

RECEIVING STEREO/SAP BROADCASTS

The Multi-channel TV Sound or MTS feature on this TV allows you to improve your TV viewing with high fidelity stereo sound. MTS also provides for an extra channel called Second Audio Program or SAP, used to transmit a second language for bilingual transmission or other sound.



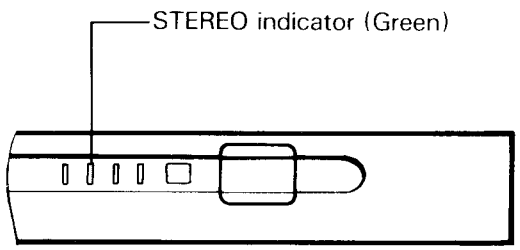
MTS BUTTON

Each time you press the button, the STEREO, SAP, or MONAURAL mode will be selected in order.
The selected mode will be displayed in magenta.

Select the appropriate mode according to various incoming broadcast signals.

LISTENING TO STEREO SOUND

If a channel is broadcasting in stereo, the STEREO indicator (green) will light up.



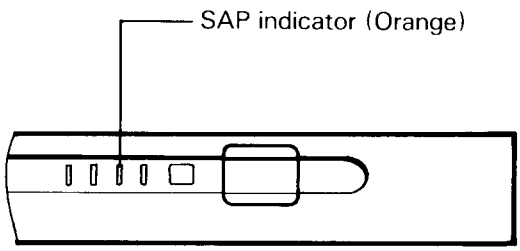
Press the MTS button until "STEREO" is displayed in magenta.

If a broadcasting signal is not strong enough and noise-free stereo sound is not available, select the MONAURAL mode by pressing the MTS button to receive monaural sound. The noise should stop.

Normally this function can be left in the STEREO mode. Your TV will then automatically reproduce either stereo or monaural sound, whichever is broadcast.

LISTENING TO SECOND LANGUAGE

If a channel is broadcasting "Second Audio Program", the SAP indicator (orange) will light up.



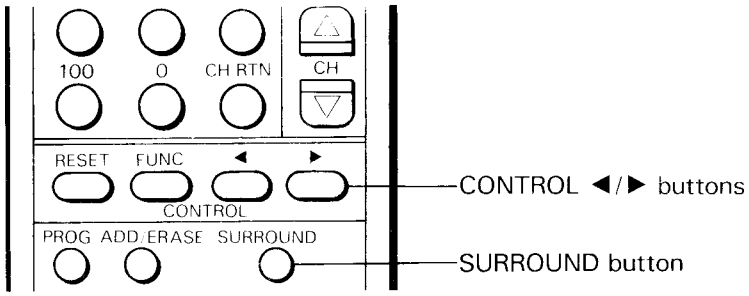
Select the SAP mode by pressing the MTS button. You will hear only the second language from the left and right speakers.

Notes:

- Please be sure you have selected the Stereo mode if broadcast is in stereo.
- The selected mode will be retained even after the TV set has been turned off.
- If the STEREO (or SAP) indicator does not light up in spite of a known MTS broadcast, select the Stereo or SAP mode by pressing the MTS button again.
- The MTS button does not function in the VIDEO mode.

OPERATING SURROUND FUNCTION

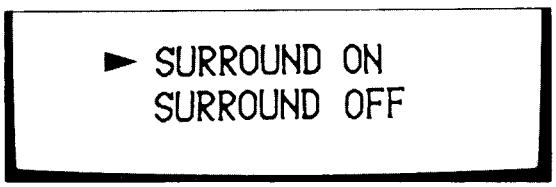
The Surround function expands the audio listening field wider and deeper than you would believe possible from a TV's speakers. This function processes stereo signals from a TV broadcast or Video input.
If a TV program is broadcast in monaural, your TV will automatically reproduce monaural audio.



TO ACTIVATE SURROUND

1 Make sure the channel you are watching is broadcasting in stereo. If in stereo, the STEREO indicator will light up. Then select the Stereo mode by pressing the MTS button.

2 Press the SURROUND button on the Remote Control to call up the Surround ON/OFF mode on-screen display shown below.



Each time you press the button, "ON" mode and "OFF" mode will alternate. Press the button until "SURROUND ON" is displayed in magenta.
The Surround function has now been activated.

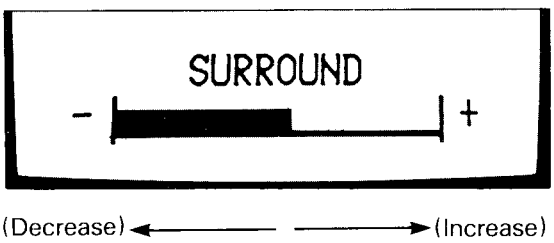
To deactivate this function, select "SURROUND OFF".

Note: Normally you can leave the MTS button set to "STEREO" and the Surround function set to "ON". Your TV will then automatically produce either SURROUND stereo or monaural, whatever is broadcast.

TO ADJUST SURROUND LEVEL

1 Press the SURROUND button on the Remote Control to call up the Surround ON/OFF mode on-screen display.

2 Press the CONTROL ► or ◄ button while the Surround ON/OFF mode display is on the screen to call up the Surround adjustment mode display shown below.



3 Press ► to increase Surround level.
Press ◄ to decrease Surround level.
Press and hold either button until your desired level is obtained.
A visual display of the Surround level is provided by a magenta bar graph displayed on the screen.

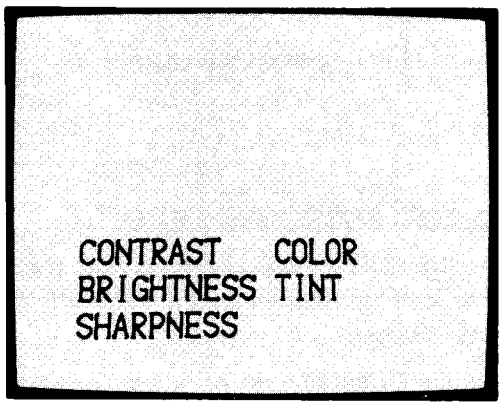
ADJUSTING PICTURE

You may with to adjust picture functions (CONTRAST, BRIGHTNESS, SHARPNESS, COLOR and TINT) to suit your personal preference.

1 Press the FUNC button on the Remote Control or the MENU button on the TV set to display the Picture menu shown below.

Repeatedly press the FUNC button on the Remote Control or the ADV button on the TV set, then press the CONTROL ▶(+) or ◀(−) button to adjust each picture function.

Picture menu

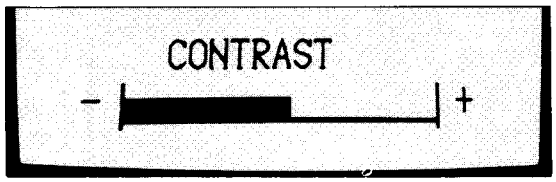


Notes:

- The Picture menu will automatically disappear from the screen if no control has been operated for about 15 seconds.
- The adjustment mode display will automatically disappear from the screen if no control has been operated for about 6 seconds.
- If you continue to adjust any picture functions, press the FUNC button or the ADV button while the adjustment mode display remains on the screen. The next function will be selected. This is a quick step approach for total picture adjustments.
- The ADV button on the TV set will function only when any of the menu displays is on the screen.

TO ADJUST CONTRAST

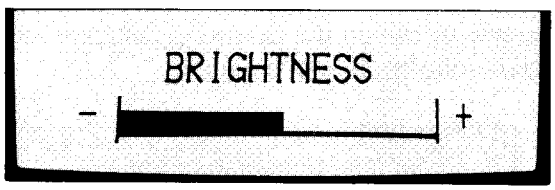
1 Press the FUNC button or the ADV button until "CONTRAST" is displayed in magenta, then press the CONTROL ▶(+) or ◀(−) button.



2 Press ▶(+) to increase contrast. The magenta bar moves right.
Press ◀(−) to decrease contrast. The magenta bar moves left.
Press and hold either button until your desired contrast is obtained.

TO ADJUST BRIGHTNESS

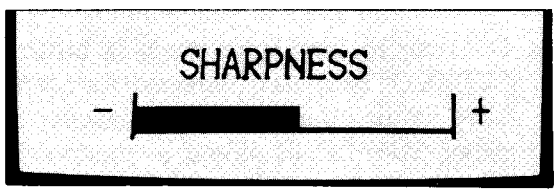
1 Press the FUNC button or the ADV button until "BRIGHTNESS" is displayed in magenta, then press the CONTROL ▶(+) or ◀(−) button.



2 Press ▶(+) to increase brightness.
Press ◀(−) to decrease brightness.
Press and hold either button until your desired brightness is obtained.

TO ADJUST SHARPNESS

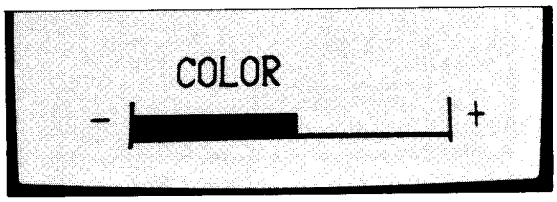
1 Press the FUNC button or the ADV button until "SHARPNESS" is displayed in magenta, then press the CONTROL ▶(+) or ◀(−) button.



2 Press ▶(+) for sharper picture.
Press ◀(−) for softer picture.
Press and hold either button until your desired sharpness is obtained.

TO ADJUST COLOR

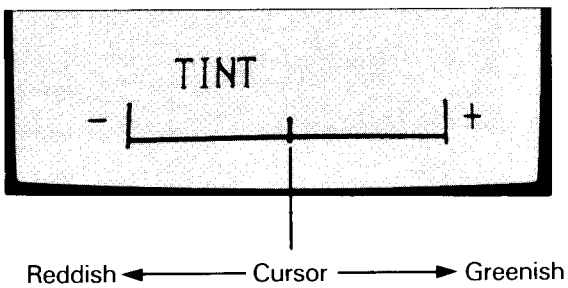
1 Press the FUNC button or the ADV button until "COLOR" is displayed in magenta, then press the CONTROL ▶(+) or ◀(−) button.



2 Press ▶(+) to increase color intensity.
Press ◀(−) to decrease color intensity.
Press and hold either button until your desired color intensity is obtained.

TO ADJUST TINT

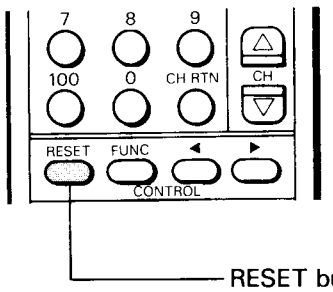
1 Press the FUNC button or the ADV button until "TINT" is displayed in magenta, then press the CONTROL ▶(+) or ◀(−) button.



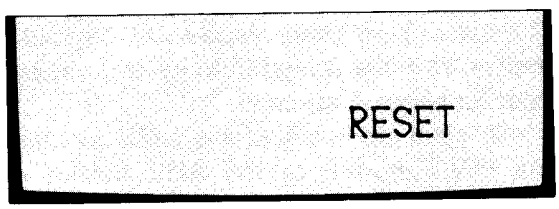
2 Press ▶(+) to add green tint to the color tone.
Press ◀(−) to add red tint to the color tone.
Press and hold either button until natural flesh tone is obtained.
The cursor will be indicated in yellow at the center setting.

RESET FUNCTION

You can restore all picture and audio functions to the factory-preset level by one push of the RESET button on the Remote Control shown below.



Pressing the button will automatically set the CONTRAST to the maximum and all other functions (BRIGHTNESS, SHARPNESS, COLOR, TINT, BASS, TREBLE and BALANCE) at the center.
The word "RESET" will be displayed on the screen for a few seconds as shown below.



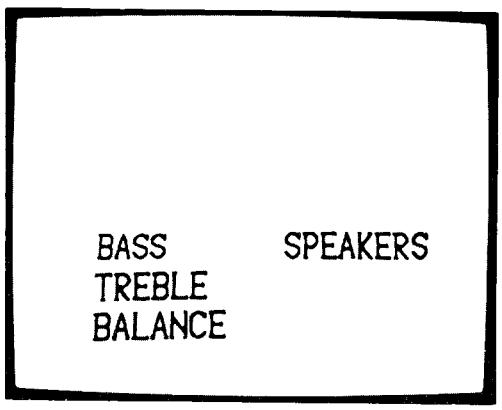
ADJUSTING AUDIO

You may wish to adjust audio functions (BASS, TREBLE, and BALANCE) to suit your personal preference.

1 Press the FUNC button on the Remote Control or the MENU button on the TV set to display the Audio menu shown below.

Repeatedly press the FUNC button or the ADV button on the TV set, then press the CONTROL ▶(+) or ◀(−) button to adjust each audio function.

Audio menu

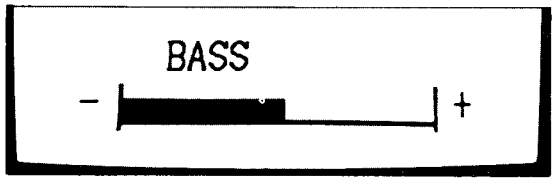


Notes:

- The Audio menu will automatically disappear from the screen if no control has been operate for about 15 seconds.
- The adjustment mode display will automatically disappear from the screen if no control has been operated for about 6 seconds.
- If you continue to adjust any audio functions, press the FUNC button or the ADV button while the adjustment mode display remains on the screen. The next function will be selected. This is a quick step approach for total audio adjustments.
- To return the audio functions you have adjusted to the normal settings, press the RESET button on the Remote Control. See page 25.
- The ADV button on the TV set will function only when any of the menu displays is on the screen.
- The SPEAKERS function is explained on page 34.

TO ADJUST BASS

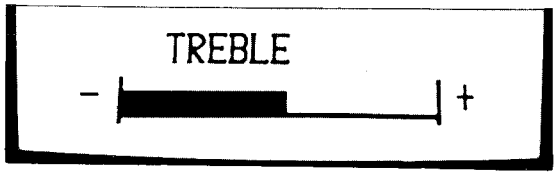
1 Press the FUNC button or the ADV button until "BASS" is displayed in magenta, then press the CONTROL ▶(+) or ◀(−) button.



2 Press ▶(+) to increase bass.
Press ◀(−) to decrease bass.
Press and hold either button until your desired bass level is obtained.

TO ADJUST TREBLE

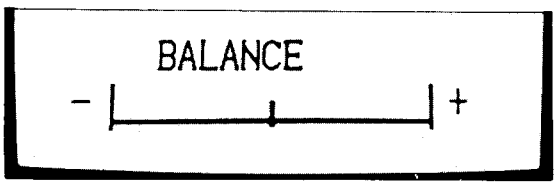
1 Press the FUNC button or the ADV button until "TREBLE" is displayed in magenta, then press the CONTROL ▶(+) or ◀(−) button.



2 Press ▶(+) to increase treble.
Press ◀(−) to decrease treble.
Press and hold either button until your desired treble level is obtained.

TO ADJUST BALANCE

1 Press the FUNC button or the ADV button until "BALANCE" is displayed in magenta, then press the CONTROL ▶(+) or ◀(−) button.



2 Press ▶(+) to lower sound from the left speaker.
Press ◀(−) to lower sound from the right speaker.
Press and hold either button until the sound seems to originate from a point halfway between the speakers. The cursor will be indicated in yellow at the center setting.

LOCKING CHANNELS FOR PARENTAL CONTROL

This feature allows programming the TV so that any specific channel cannot be viewed without the use of the CHANNEL NUMBER buttons on the Remote Control.
This function is included in the Set up menu.

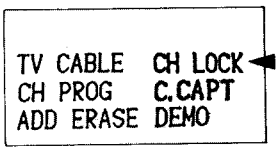
TO LOCK OUT CHANNELS

1 Select the channel you want to lock out.

2 Press the FUNC button on the Remote Control or the MENU button on the TV set to display the Set up menu on the screen.

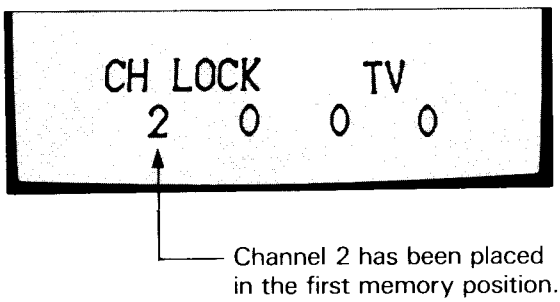
Repeatedly press the FUNC button on the Remote Control or the ADV button on the TV set until "CH LOCK" is displayed in magenta.

Set up menu



3 Press the CONTROL ▶(+) or ◀(−) button once. The channel lock program mode display shown below appears on the screen. This TV has four memory spaces for the TV mode and the CABLE mode respectively.

<Example: Channel 2 is locked out>



The program display will remain on the screen for about 4 seconds.

4 Repeat steps 1 through 3 for each channel you want to lock out.

5 Press the CHANNEL ▲ or ▼ button to make sure the channels you have locked out are not tuned.

You can select the channels you have locked out using the CHANNEL NUMBER buttons on the Remote Control.

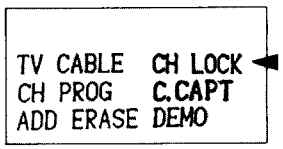
TO RESTORE CHANNELS

You may want to restore the channels which have been locked out once.

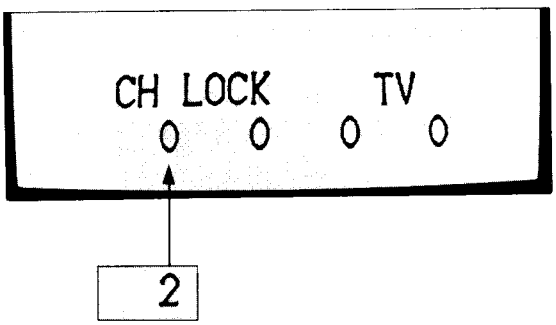
1 Select the channel you want to restore to normal viewing by pressing the CHANNEL NUMBER buttons.

2 Select "CH LOCK" function on-screen display following the step 2 at the left column.

Set up menu



3 Press the CONTROL ▶(+) or ◀(−) button once. The channel lock program mode display shown below will appear on the screen.



The channel selected at step 1 has been restored to normal viewing.

4 Repeat steps 1 through 3 for other channels.

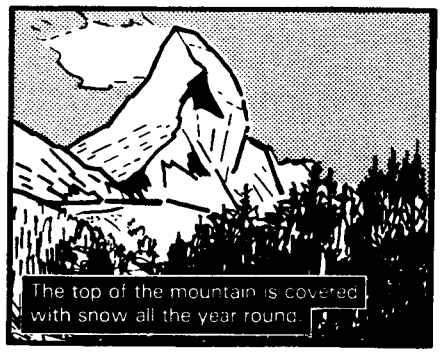
5 Press the CHANNEL ▲ or ▼ button to make sure the channels you have restored to normal viewing are tuned.

Note: This TV automatically tunes to the channel you were viewing last whenever you turn on the TV. If you turn off the TV tuned in the locked channel, simply change the TV to an unlocked channel and then turn off the TV.

CLOSED CAPTION

CAPTION

Closed captioning displays dialogue, narration, and/or sound effects of a TV program on the screen in a manner similar to subtitles in a movie.
Captioning is especially helpful for hearing impaired individuals.
Captions will appear at either the top or bottom of the screen during caption broadcasts as shown at the right.



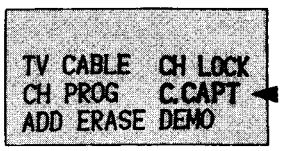
TO DISPLAY CAPTIONS

1 Check your local TV listings for the time and channel number of captioned programs. Programs captioned are usually notated by its service marks such as "CC".

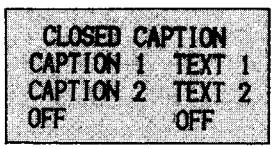
2 Press the FUNC button on the Remote Control or the MENU button on the TV set to display the Set up menu on the screen.

Repeatedly press the FUNC button on the Remote Control or the ADV button on the TV set until "C. CAPT" is displayed in magenta.

Set up menu



3 Press the CONTROL ▶(+) or ◀(−) button to call up the closed caption select mode display shown below on the screen.



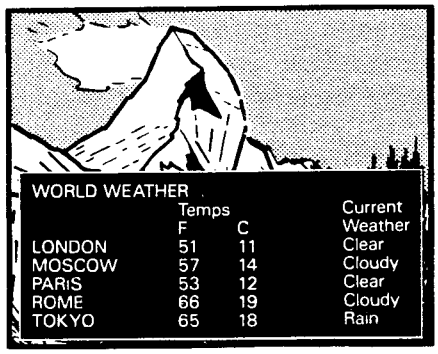
4 Press the CONTROL ▶ (+) or ◀ (−) button until "CAPTION 1" or "CAPTION 2" is displayed in magenta.
The CAPTION 2 mode may be utilized for alternate languages if they are being transmitted.
The TV will display captions automatically if the program you are watching has been captioned.

If you don't want the caption displayed, select "OFF".

Note: The following situations may not be acceptable to decode the closed-captioned signal with this TV set.
- The video tape which was dubbed.
- The weak signal reception.
- The nonstandardized signal reception.

TEXT

Text is information that is displayed on the lower half of a TV screen. It is not related to the program on the TV screen. For example, it could be a listing of the closed-captioned programs, news, weather information or stock market reports.

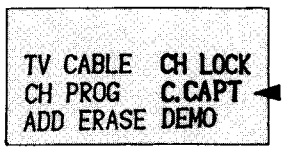


TO DISPLAY TEXT INFORMATION

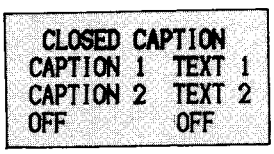
1 Press the FUNC button on the Remote Control or the MENU button on the TV set to display the Set up menu on the screen.

Repeatedly press the FUNC button on the Remote Control or the ADV button on the TV set until "C. CAPT" is displayed in magenta.

Set up menu



2 Press the CONTROL ▶ (+) or ◀ (−) button to call up the closed caption select mode display shown below on the screen.



3 Press the CONTROL ▶ (+) or ◀ (−) button until "TEXT 1" or "TEXT 2" is displayed in magenta.

The TV displays TEXT information automatically if the program you are watching has text added.

If you don't want to display the TEXT information, select "OFF".

Note: If you select a Caption format channel and the "TEXT" mode, the TEXT screen will always be displayed.
However, if the TEXT character signal is not transmitted, the characters are not displayed.

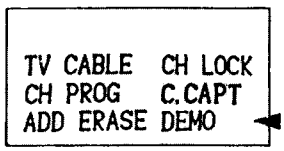
USING DEMONSTRATION FUNCTION

When this function is activated, your TV will automatically display a variety of its on-screen menus and special features. This function is provided for the TOSHIBA dealer. You may not need to use this function.

1 Press the FUNC button on the Remote Control or the MENU button on the TV set to display the Set up menu on the screen.

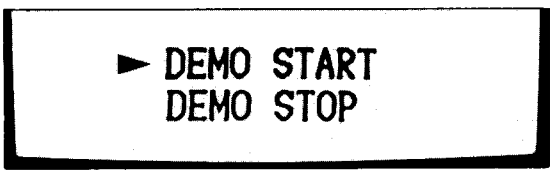
Repeatedly press the FUNC button on the Remote Control or the ADV button on the TV set until "DEMO" is displayed in magenta.

Set up menu



Press the CONTROL ▶(+) or ◀(−) button once.
The on-screen display shown below will appear.
The words "DEMO START" should be in magenta.
The demonstration will start after about 6 seconds.

The on-screen display shown below will appear.
The words "DEMO START" should be in magenta.
The demonstration will start after about 6 seconds.



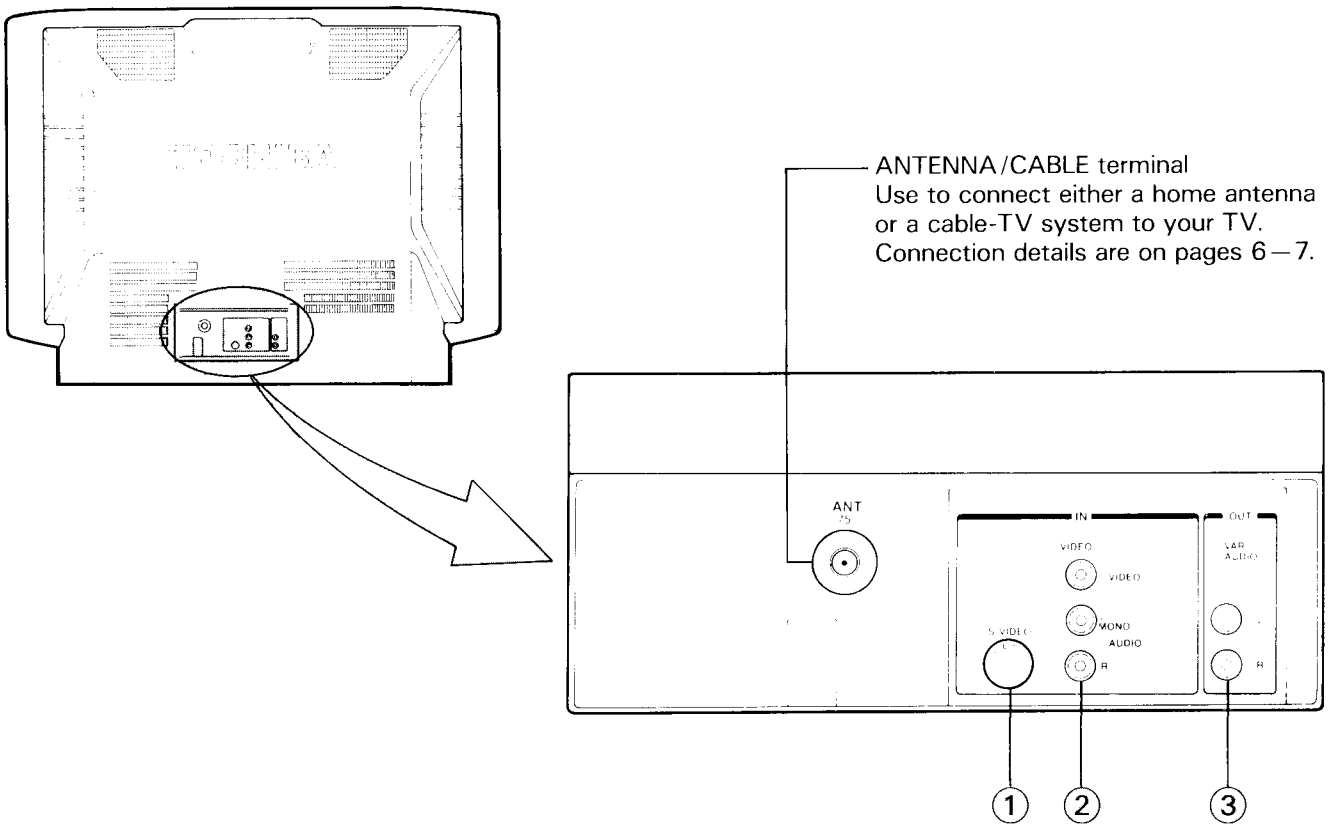
To stop the demonstration, select "DEMO STOP" mode.

Note: The on-screen demonstration will continue, even if the TV is turned off and on, or any other buttons are pressed, until you stop it following the instructions above.

MONITOR PANEL

This TV set is equipped with S-VIDEO INPUT connector, VIDEO/AUDIO INPUT jacks, and VARIABLE AUDIO OUTPUT jacks for connecting your desired video/audio equipment.

REAR VIEW



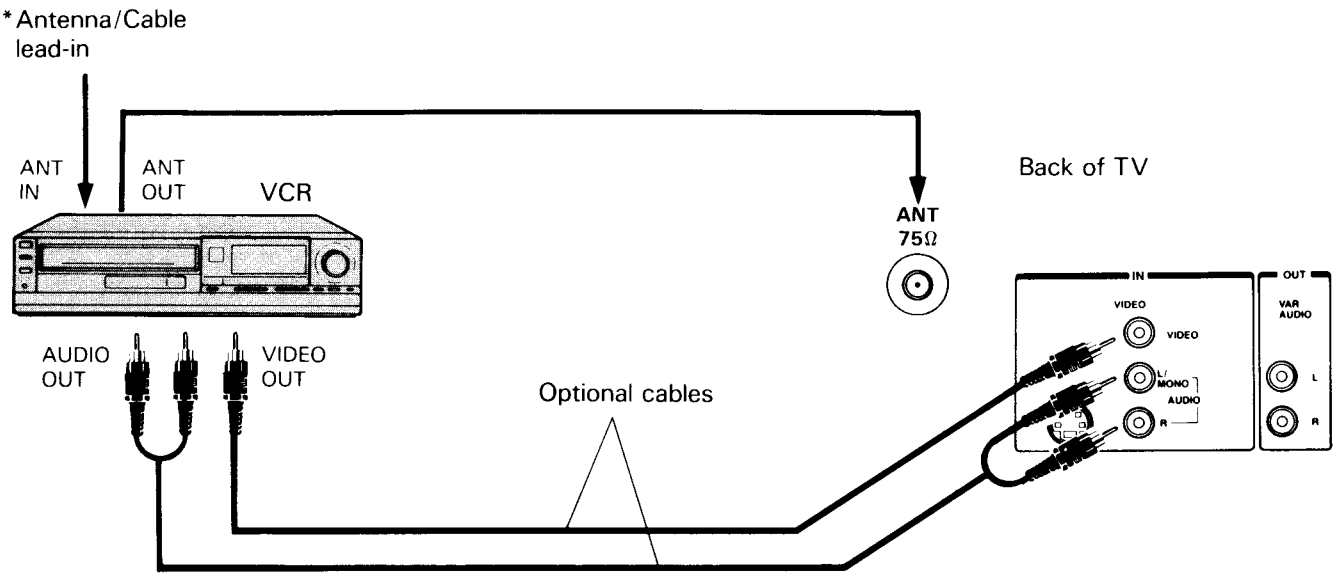
① **S-VIDEO Connector**—provides for direct S-Video connection from S-VHS VCR. The TV's VIDEO 1 audio jacks can also be used to connect the VCR's audio cables. Connection details are on page 32.

② **VIDEO Jacks**—provide for direct connection of video devices (VCR, Video Disc Player, etc.) with video/audio inputs. Connection details are on page 33.

③ **VARIABLE AUDIO OUTPUT Jacks**—feed volume-controlled stereo audio out from whatever is displayed on the screen, allows connection of audio amplifier and lets you adjust sound level with TV's remote. Connection details are on page 34.

CONNECTING STANDARD VCR

Connect the VIDEO jacks to the video and audio output jacks of a VCR, Video Disc Player, etc. for playback of video material. The material being played back on the video equipment can be viewed on the TV screen.

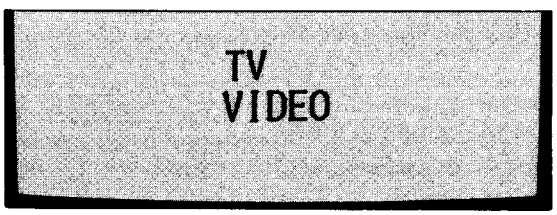


SELECTING VIDEO SOURCES

To operate your TV normally, refer to the instructions furnished with the video equipment.

1 Turn the TV set and VCR (or VDP) ON.

2 Press the TV/VIDEO button on the Remote Control or on the TV set to select the VIDEO mode;
Each time you press the button, "TV" or "VIDEO" mode will alternate.
The selected mode will be displayed in magenta.



Note: The TV/VIDEO button on the TV set will function as the ADV button while any of four menu displays (Picture, Audio or Set up) is on the screen.

3 Operate your VCR (or VDP) normally.

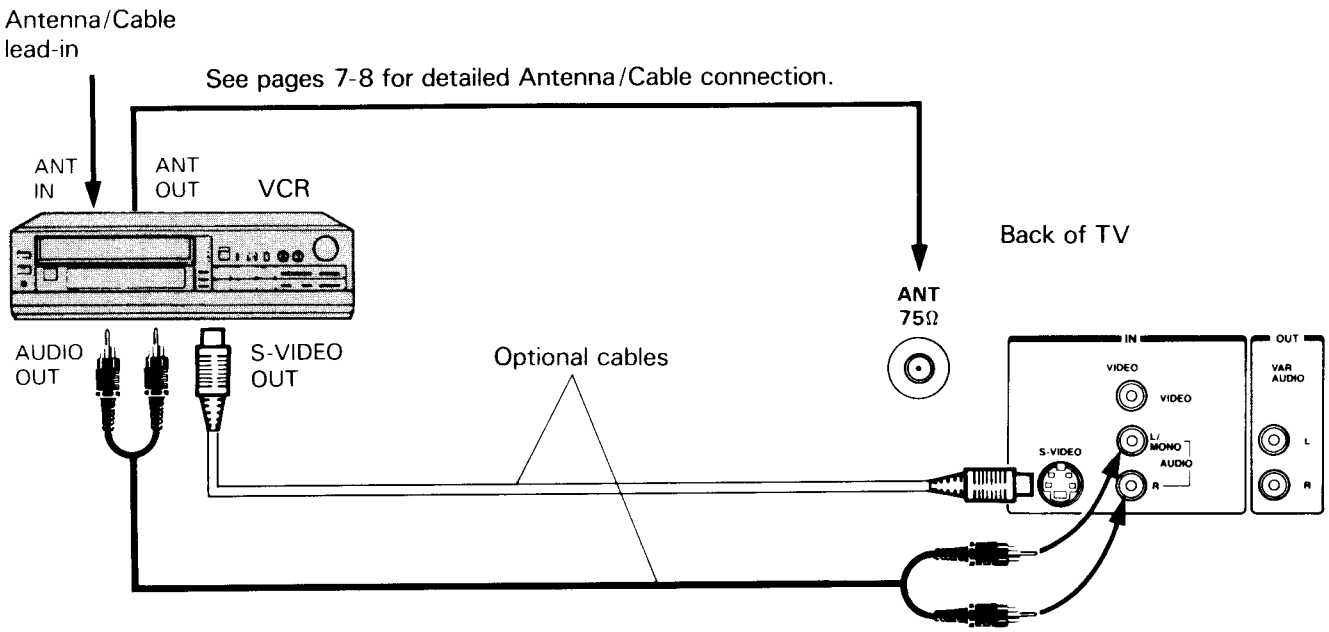
Notes:

- When using monaural sound equipment, connect its AUDIO OUT to the L/MONO jack on the TV set.

* If you use a 2-way signal splitter for antenna/cable connection, you can view either TV programs, or VCR tapes and not be concerned about the position of the VCR's TV/VCR switch. Connection details are on pages 7 and 8.

CONNECTING VCR WITH S-VIDEO CONNECTOR

If you connect a VCR with an S-VIDEO connector to the "S-VIDEO" connector on the back of the TV, you must also connect the audio cables to the AUDIO jacks of "VIDEO 1" inputs on the back of the TV. The S-Video cable supplies video signals only. Audio signals are separate.



SELECTING VIDEO SOURCES

1 Turn the TV set and VCR ON.

2 Select the "VIDEO" mode by pressing the TV/VIDEO button on the Remote Control or on the TV set.

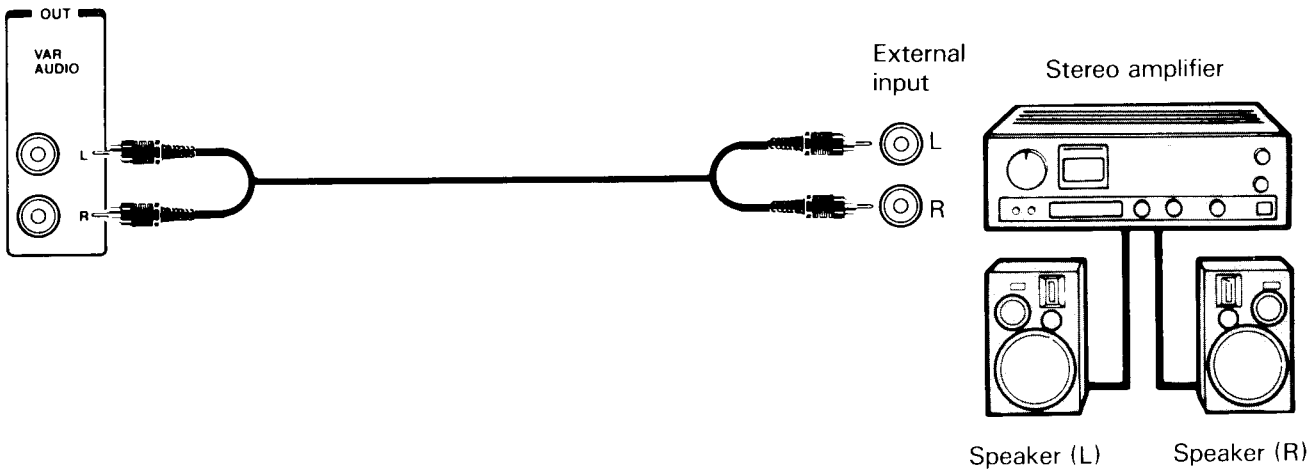
3 Operate your VCR normally.

Notes:

- Do not connect video equipment to both the "S-VIDEO" and "VIDEO" of VIDEO terminals as the same time.
- The S-VIDEO terminal accepts SEPARATED Luminance/Chrominance (Y-C) signals conforming to the NTSC standard.

CONNECTING AUDIO AMPLIFIER

Connect the VARiable AUDIO OUT jacks to the external input jacks on the stereo amplifier. You will be able to change and mute volume with the TV's remote control. You will also be able to control bass, treble and balance functions.



OPERATION

1 Turn the TV set and stereo amplifier ON.

2 Adjust the VOLUME control on the TV for a moderate listening level.

3 Disconnect the built-in speakers following the instructions below.

4 Adjust the volume control on the stereo amplifier for a moderate listening level.

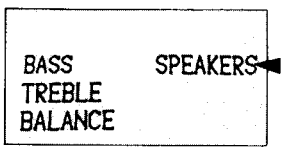
5 Control of the audio can now be done using the audio function buttons (VOLUME, MUTE, BASS, TREBLE and BALANCE) on the TV's remote control.

TO DISCONNECT THE BUILT-IN SPEAKERS

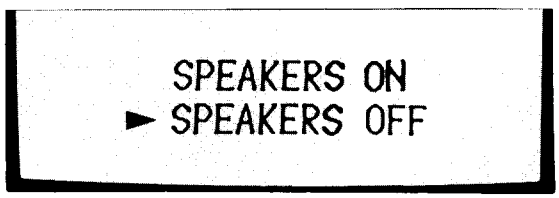
1 Press the FUNC button on the Remote Control or the MENU button on the TV set to display the Audio menu shown below on the screen.

Repeatedly press the FUNC button or the ADV button on the TV set until "SPEAKERS" is displayed in magenta.

Audio menu



2 Press the CONTROL ▶(+) or ◀(−) button to call up the SPEAKERS ON/OFF mode on-screen display shown below.
Each time you press the button, "ON" mode and "OFF" mode alternate.



Press either button until "SPEAKERS OFF" is displayed in magenta.
The built-in speakers have now been disconnected.

To resume the sound, select "SPEAKERS ON".

CLEANING AND CARE

WARNING: TV sets use High Voltage. Do not try to remove the cabinet back. Refer servicing to qualified service personnel.

■ To clean the TV screen:

1. First remove the plug from the power outlet to avoid possible shock hazard.
2. Use a clean cellulose sponge or chamois cloth dampened with a solution of mild detergent and warm water to clean TV screen and trim. Do not use too much water on the TV screen.
3. Remove any extra moisture with the same cloth or a dry one.

■ To maintain the finish and appearance of the cabinet, polish it from time to time with a quality furniture polish.

Note: Never use strong solvents such as thinner, benzene or other chemicals on or near cabinet, as they might damage the finish of the cabinet.

SPECIFICATIONS

TELEVISION SYSTEM:	NTSC standard
CHANNEL COVERAGE:	VHF; 2 through 13 UHF; 14 through 69 Cable TV; mid band (A-8 through A-1, A through I) super band (J through W) hyper band (AA through ZZ, AAA, BBB) ultra band (65 through 94, 100 through 125)
POWER SOURCE:	120V AC, 60Hz
POWER CONSUMPTION:	105W (average)
AUDIO POWER:	5W+5W
SPEAKER TYPE:	Two 2-3/4″×5-1/8″ oval
VIDEO/AUDIO TERMINALS:	S-VIDEO INPUT Y-INPUT: 1V-p, 75 ohm, negative sync. C-INPUT: 0.286Vp-p (burst signal), 75 ohm VIDEO INPUT VIDEO: 1Vp-p, 75 ohm, negative sync. AUDIO: 150mVrms. (30% modulation, 47k ohm) VARIABLE AUDIO OUTPUT 0~350mVrms. (30% modulation, 4.7k ohm)
DIMENSIONS:	Width ..... 37-13/32 inches (950mm) Height..... 28-43/64 inches (728mm) Depth ..... 22-9/32 inches (566mm)
WEIGHT:	136.7lbs (62kg)
SUPPLIED ACCESSORIES:	1. Remote Control with 2 size "AAA" batteries 2. Antenna adapter

Design and specifications are subject to change without notice.

BEFORE CALLING SERVICE PERSONNEL

Before calling service personnel, please check the following chart for a possible cause of the problem you are experiencing. A minor adjustment on your part may eliminate the problem and restore your TV reception.

Symptoms	Check	Adjustments
● No picture, no sound	● Be sure power cord is plugged in. ● May be station trouble. ● Check antenna connections. ● Check antenna for broken wires.	● Press POWER button. ● Try another channel.
● No UHF, VHF OK	● Be sure TV CABLE function is in "TV" mode.	
● No sound, picture OK	● May be station trouble. ● Check if SPEAKERS ON/OFF function (page 34) is properly set.	● Try another channel. ● Adjust VOLUME.
● Poor sound, picture OK	● May be station trouble. ● Check antenna connections. ● May be local interference from appliance.	● Try another channel. ● Adjust VOLUME. ● Adjust BASS, TREBLE, or BALANCE control. ● Re-orient antenna.
● Poor picture, sound OK Snowy picture Lines in picture Distorted picture Weak picture	● May be local interference from appliance. ● Check antenna connections. ● Check antenna for broken wires. ● May be station trouble.	● Try another channel. ● Adjust BRIGHTNESS. ● Adjust CONTRAST. ● Adjust SHARPNESS. ● Re-orient antenna.
● Poor reception of broadcast channels	● Check antenna connections. ● Check antenna for broken wires. ● If VCR is connected, check TV/VCR switch.	● Try another channel. ● Re-orient antenna.
● Unable to select a certain channel with CHANNEL ▲/▼ buttons	● That channel may be locked out with CH LOCK function (page 27).	
● Multiple images (ghosts)	● May be station trouble. ● Check antenna connections.	● Try another channel. ● Re-orient antenna.
● Poor color or No color	● May be station trouble. ● Check antenna connections. ● Check antenna for broken wires. ● May be local interference from appliance. ● Check if station is broadcasting in color.	● Try another channel. ● Re-orient antenna. ● Adjust TINT. ● Adjust COLOR.
● Weak and noisy stereo program	● Check antenna connections. ● Check antenna for broken wires.	● Re-orient antenna. ● Try pressing MTS button in MONAURAL mode.
● No stereo or SAP sound from a known MTS broadcast	● Check if MTS button is properly set.	
● Remote control does not work	● Be sure power cord is plugged in. ● Check battery in Remote Control.	● Change batteries.

LIMITED WARRANTY

Toshiba America Consumer Products, Inc. ("TACP") and Toshiba Hawaii Inc. ("THI") make the following limited warranties. These limited warranties extend to the original consumer purchaser or any person receiving this set as a gift from the original consumer purchaser and to no other purchaser or transferee.

Limited One (1) Year Warranty
TACP and THI warrant this product and its parts against defects in materials or workmanship for a period of one (1) year after the date of original retail purchase. During this period, TACP and THI will repair a defective product or part, without charge to you. Service on this product will be made available to you in your home.

Limited Two (2) Year Warranty of Picture Tube
TACP and THI further warrant the picture tube in this product against defects in materials or workmanship for a period of two (2) years after the date of original retail purchase. During this period, TACP and THI will replace a defective picture tube without charge to you, except that if a defective picture tube is replaced after one (1) year from the date of the original retail purchase, you pay labor charges involved in the replacement.

Owner's Manual and Registration Card
You should read this owner's manual thoroughly before operating this product. You should also insure that your name and address are on file as owner's of a TACP/THI product by completing and mailing the enclosed registration card within ten days after you, or the person who has given you this product as a gift, purchased this product. This is one way to enable TACP/THI to provide you with better customer service and improved products. Failure to return the card will not affect your rights under this warranty so long as you retain other proof of purchase such as a bill of sale.

Your Responsibility
The above warranties are subject to the following conditions:
(1) You must retain your bill of sale or provide other proof of purchase.
(2) All warranty servicing of this product must be made by an Authorized TACP/THI Service Station.
(3) These warranties are effective only if the product is purchased and operated in the U.S.A.
(4) Labor service charges for set installation, set up, adjustment of customer controls and installation or repair of antenna systems are not covered by this warranty. Reception problems caused by inadequate antenna systems are your responsibility.
(5) Warranties extend only to defects in materials or workmanship as limited above and do not extend to any product or parts which have been lost or discarded by you or to damage to products or parts caused by misuse, accident, improper installation, improper maintenance or use in violation of instructions furnished by us; or to units which have been altered or modified without authorization of TACP/THI or to damage to products or parts thereof which have had the serial number removed, altered, defaced or rendered illegible.

Step-By-Step Procedures — How to Obtain Warranty Service

If, after following all of the operating instructions in this manual and checking the section "BEFORE CALLING SERVICE PERSONNEL", you find that service is needed:
(1) Contact one of the TACP/THI Service Centers listed below for warranty service or call the TACP toll free number **800-631-3811** within thirty (30) days after you find a defective product or part to find the nearest TOSHIBA Authorized Service Station or authorized TOSHIBA Dealer.
(2) Please present your bill of sale or other proof to the Authorized Service Station. Service on this product will be made available to you in your home.
(3) If you have any question about service, please contact one of the following TACP/THI Service Centers:

IN THE CONTINENTAL UNITED STATES
Should your unit require service, Call

NORTHEAST	MIDWEST	WEST	SOUTHEAST	SOUTHWEST	HAWAII
82 Totowa Road, Wayne, New Jersey 07470	1010 Johnson Drive, Buffalo Grove, Illinois 60089-6900	5490 E. Francis St., Ontario, California 91761	6115 Jimmy Carter Blvd., Suite C2, Norcross, Georgia 30071-4607	1421 Champion Drive, Suite 304, Carrollton, Texas 75006	327 Kamakee Street, Honolulu, Hawaii 96814

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